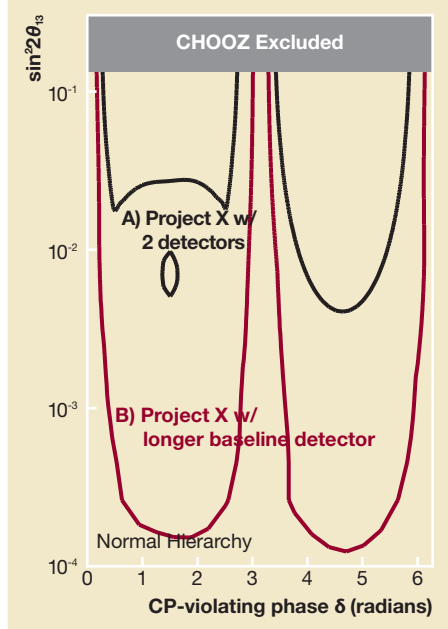95 percent C.L. (dotted lines) and 3σ (solid lines) sensitivity to the mass ordering assuming the normal mass hierarchy. For the inverted hierachy, flip each curve around a vertical line through δ=π. All sensitivies assume 3 years of neutrino and 3 years of antineutrino running, corresponding to 15×10^{20}, 30×10^{20}, 60×10^{20}, and 120×10^{20} protons on target for each neutrino type for NuMI, SNuMI, Project X at 120 GeV, and Project X at 60 GeV, respectively. Curves A-D use 120 GeV protons and E uses 60 GeV protons.

A) NOνA 15 kt detector with NuMI
B) NOνA 15 kt detector with SNuMI
C) NOνA 15 kt detector with Project X
D) Two 100 kt LAr detectors at first (700 km) and second (810 km) oscillation maxima using Project X and the NuMI beamline.
E) One 100 kt LAr (equivalent to ~300 kt water Cerenkov) detector at 1300 km using a wide-band neutrino beam with Project X.

3σ sensitivity to CP-violation assuming the normal mass hierarchy. For the inverted hierachy, flip each curve around a vertical line through δ=π. All sensitivies assume 3 years of neutrino and 3 years of antineutrino running, corresponding to 60×10^{20} and 120×10^{20} protons on target for each neutrino type for Project X at 120 GeV and 60 GeV, respectively.

A) Two 100 kt LAr detectors at first (700 km) and second (810 km) oscillation maxima using Project X at 120 GeV and the NuMI beamline.
B) One 100 kt LAr (equivalent to ~300 kt water Cerenkov) detector at 1300 km using a wide-band neutrino beam with Project X at 60 GeV.